Audio Research DAC 8 digital converter

By Jimmy Hughes

DACs the Way I Like It...

Once upon a time, buying an outboard DAC was simply an eminently sensible way to upgrade an older CD player that was starting to sound a little jaded. After all, buying a new DAC promises to rejuvenate the sound of your hi-fi system, upgrading your entire silver disc collection at a stroke. So – why not?

Certainly, that's the lure for CD playing audiophiles. Therefore, in one sense, the DAC 8 will stand or fall by the level of improvement it delivers over an existing player's internal digital to analogue converter. But, access to other sources of digital music is another reason to consider buying a DAC 8 – more on this later.

Like all Audio Research products, the DAC 8 requires a hefty burn-in period before sounding at its best – ARC reckon on at least 600 hours. Prior to being fully run-in, the DAC 8 may sound a shade tight and unbending – like a brand new pair of shoes that fit perfectly, but nonetheless feel a wee bit stiff.

However, with extended use, the treble opens-up and grows sweeter. Overall, the sound will become freer and more relaxed, with no loss of definition or resolution.

Fortunately, our review DAC 8 had seen previous action, and promptly produced impressive results.

We were immediately impressed by the bold, big-boned sound of the DAC 8, which delivered massive presence, power, and scale. Of course, this is down to the quality of the sound produced. But there's another reason. Shrewdly, ARC has given the DAC 8's analogue outputs significantly higher gain than usual.

So, expect to hear an increase in volume of at least 2 or 3dB, (probably more), compared to most CD players. When comparing the DAC 8 against your existing CD player, this means you'll need to reduce amplifier volume levels with the former to compensate for this extra gain.

But, intriguingly, even when volume levels are reduced for the DAC 8, the subjective impression still seems to be one of increased power and greater drive. Via the DAC 8, music seems to have extra presence and immediacy, ▶

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sounding 'bigger' and more dimensional, with increased dynamic range and enhanced impact and attack.

Curiously perhaps, this makes it possible to listen at slightly reduced volume levels. Because the sound has greater drive, it seems to fill the room more effortlessly. As a result, you don't have to play things excessively loudly to create a big room-filling sound. The music projects with greater ease – just like good analogue.

While the DAC 8 produces tremendous weight and security, its musical presentation is subtle and finely shaded, with plenty of delicacy. However, there's nothing effete or fragile about the sound; it's always solid and authoritative. Tonally, the results are smooth and refined, with a nicely open, highly detailed, top-end.

Subjectively, the internal separation between voices and instruments is extremely good too. This produces an enhanced sense of space and depth, with increased dimensionality, plus the impression of a wider deeper soundstage, and less of that dynamic 'flatness' that can mar CD reproduction. Impressive stuff!

But while the sonic improvement delivered by the DAC 8 over your player's internal DAC is important, the versatility of the product is an equally strong selling point. With CD sales in decline due to downloading, many listeners want a product that allows access to music in different digital formats.

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Those of us partnering the DAC 8 with a CD player/transport will probably connect using the conventional S/PDIF interface. But, a USB 2.0 HS input, optimised for six different sampling rates, is also provided. These rates are 44.1, 48, 88.2, 96, 176.4, and 192kHz, making the DAC 8 compatible with a wide variety of sources.

While S/PDIF remains the input of choice for high quality audio, the DAC 8 promises comparable high-grade performance from USB based digital sources. As a result, Audio Research claims the DAC 8 will provide superior sonic results, regardless of the digital input chosen.

Moreover, unlike ARC's DAC 7, the DAC 8 lets you listen to digital music at its original sampling rate, ensuring 'bit-perfect' low jitter results. Because PC and MAC systems do not properly support sampling rates over 96kHz, ARC's special ASIO drivers ensure USB sources stay sonically transparent at all sampling frequencies.

Four 24bit digital-to-analogue converters are employed, with each channel having dual converters running in mono mode. ARC claims this lowers the noise floor and increase dynamic range. Two low-jitter master oscillators are used – one for 44.1. 88.2, and 176.4kHz, and the other for 48, 96, and 192kHz sampling rates.

The master oscillator selects the correct sampling frequency automatically, avoiding decoding and quantization errors. All inputs are Galvanically isolated from the source to eliminate noise and jitter entering the DAC 8. The analogue output stage features a true direct-coupled differential amplifier with bandwidth in excess of 90kHz.

The DAC 8 is a fully-balanced, zero feedback, solid-state design, with a direct-coupled FET output stage. The power supply is generously regulated, with separate audio

and digital power transformers, plus seven stages of regulation. Circuit boards are made from the same material used for ARC's Reference products.

Those using the DAC 8 with computer-based sources can set the sampling rate from 44.1 to 192kHz, allowing the inbuilt music server management software to up/down convert digital music source to the selected sampling rate. This helps ensure optimum sound quality, regardless of sampling frequency.

You can also use custom sampling rate conversion algorithms or other file formats provided by third-party suppliers, including Windows Media Player, iTunes, J Rivers Media Centre, Media Monkey, Foobar, and others. Perhaps the only thing missing is a docking station for an iPod, and some sort of USB wireless connection.

The DAC 8's USB driver software provides your computer with special high-speed audio drivers not supplied by MS Windows or Mac OS. Audio Research's USB drivers are specially designed to deliver low jitter 'bit-perfect' data transfer between the server/computer, and the DAC 8, at all sampling rates.

ARC drivers set-up a USB interface that guarantees wide bandwidth, independent of active bulk transfers from the hard drive. Via the ARC icon on your computer, you can set the DAC 8 to any sampling rate from 44.1 to 192kHz. This allows the music server/management software to up/down convert music to the appropriate sampling frequency.

This makes the DAC 8 perfect for those into downloads and computer-based hi-fi, giving it a very broad appeal. But, even when used just as a stand-alone DAC for CD, the DAC 8 delivers excellent results. Best sound quality is obtained via the balanced analogue outputs, but even the standard unbalanced outputs sound great.

The DAC 8's big imposing style of presentation ensures an impressively-full, commanding, solid quality of sound. Bass is very weighty and full-bodied for CD, and this helps create a sense of power and presence. The music all but leaps out of the speakers and bounds over to greet you. It's a very tactile vivid sort of presentation.

Those who usually find CD a little reined-in and circumspect should revel in the big, bold, three-dimensional soundstage produced by the DAC 8. It really does bring out the colour and drama in the music, especially when you utilise its balanced analogue XLR outputs. The sound has real depth and dimensionality.

In some ways, the DAC 8 is a mix of opposites. While it delivers a big dimensional sound that's notable for its depth and separation, it's also surprisingly subtle and refined. Massed violins, for example, have excellent attack and plenty of brilliance, while retaining something of that 'woody' mellowness you experience in real life.

In this respect, the DAC 8 sounds very 'analogue'. It's the sort of digital product that would find favour with those who have mixed feelings about CD, while absolutely delighting those fundamentally happy with silver disc. It sounds very clean, and tonal quality is smooth and natural, with good extension at bass and treble extremes.

Summing up, the DAC 8 is truly an awesome-sounding device. For Red Book CD, this is about as good as it gets - though perhaps ironically, the product comes most fully into its own when used with sources other than Red Book CD. But even if CD is all you play, the DAC 8 can be relied on to deliver impressive class-leading results. +

TECHNICAL SPECIFICATIONS

Audio Research DAC 8
Inputs: S/PIDF, (RCA, BNC, XLR), TOSLINK, and USB 2.0 HS.
Outputs: RCA (Unbalanced) XLR (Balanced).
Dimensions: 48cm x 13.4cm x 27cm. Handles add a further 4cm to front/back depth
Weight: 7kg
Price: £4,698.00

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